ORIGINAL RESEARCH
PROJECTS

ORYGINALNE
ARTYKUŁY BADAWCZE

Elżbieta Strutyńska-Laskus

The Maria Grzegorzewska University in Warsaw, Poland
e-mail: ela.strutynska@gmail.com
ORCID: https://orcid.org/0000-0002-1129-6316

Kamila Madeja-Bień

University of Wroclaw, Poland
e-mail: kamila.madeja-bien@uwr.edu.pl
ORCID: https://orcid.org/0000-0003-1118-0871

Małgorzata Gamian-Wilk

SWPS University of Social Sciences and Humanities, Wroclaw,
Poland & Social Behavior Research Center, Wroclaw, Poland
e-mail: mgamian@swps.edu.pl
ORCID: https://orcid.org/0000-0002-6095-5269

How the Workplace Influences Teachers' Creativity: A Two-Wave Study on Workplace Bullying, Organisational Bullying Risk Factors and Creativity

Abstract

Based on affective events theory, the present two-wave study investigated the predictive role of organisational features and exposure to workplace bullying in generating decreased creativity. Although several inhibitors of creativity at work have been identified, few longitudinal studies have aimed to determine whether affective events such as workplace bullying impact employees' creativity. In the present two-wave, time-lagged panel design study ($N = 261$), teachers

completed the Negative Activities Questionnaire, the Risk Assessment of Workplace Bullying Questionnaire and the Creative Behavior Questionnaire twice, with a six-month interval between waves. The results indicate that specific negative workplace conditions – that is, workplace bullying risk factors – in the first wave were related to exposure to workplace bullying in the first and second waves and also led to a decrease in individual creativity in the second wave. Moreover, exposure to workplace bullying in the first wave predicted a drop in two creativity facets, self-realisation and ego strength, in the second wave. However, when organisational factors were included in the model, exposure to bullying no longer predicted a decrease in creative aspects. It is suggested that to promote teachers' creativity, it is essential to prevent workplace bullying by building a constructive social climate and fostering proper leadership practices.

Keywords: creativity, workplace bullying, work environment hypothesis, organisational climate.

Introduction

Modern organisations face many challenges due to factors such as new technologies and growing global competition. To survive and meet customer expectations, organisations must develop constantly. Creativity has been recognised as a critical aspect of successful companies (Yuan et al., 2022). Creativity is defined as the production of novel and useful ideas and products (Woodman et al., 1993; Amabile et al., 1996; Ford, 1996; Hennessey & Amabile, 2010) and may be understood from the perspective of a product, process or person (Simonton, 2000). Creativity has been regarded as a cognitive ability or style (Ford, 1996) or as an individual trait or personality type (Barron & Harrington, 1981; Amabile, 1988; Chiang et al., 2014). Having a creative disposition is related to knowledge (Ford, 1996), independence and high aspirations (Helson, 1996). Creative people are fearless and have a wide range of interests, a greater openness to new experiences and cognitive flexibility (Simonton, 2000).

Companies can flourish due to creative employees; thus, it is essential to identify the personal and organisational antecedents that either foster or hinder employees' creativity. It has been found that workplace characteristics such as supervisor support (Rego et al., 2012; Yoshida et al., 2014) and challenging tasks (Tierney & Farmer, 2002; 2004) promote creativity. On the other hand, control over employees' performance (Zhou, 2003), aversive leader-

ship and an unsupportive organisational climate (Choi et al., 2009) have been identified as inhibitors of creativity. However, the image of the factors that hinder and facilitate creativity provided by previous findings is fragmentary. Thus, further studies that examine and combine insights of multiple studies regarding the factors that hinder workers' creativity are essential.

In this article, we consider a model that integrates the results from earlier studies by including previously studied creativity inhibitors and introducing workplace bullying as a new potential inhibitor. Workplace bullying is a long-lasting process (about six months) of frequent (appearing at least once a week) and repeated acts of hostile communication that humiliate an employee, who then experiences discomfort and personal and health problems (Einarsen et al., 2020; D'Cruz & Noronha, 2021). This type of bullying is one of the biggest challenges for organisations, as it has numerous negative effects on the victim (Mikkelsen et al., 2020; Conway et al., 2021; Hansen et al., 2021; van Heugten et al., 2021) and the organisation as a whole (Hogh et al., 2017; Salin & Hoel, 2020).

We base our study hypotheses on affective events theory (AET; Weiss & Cropanzano, 1996), which describes the causes, structures and consequences of affective experiences in the workplace. AET posits that the features and personalities of work environments may affect affective events. Specific events at work (e.g. mistreatment, such as bullying) then generate emotional responses, which in turn lead to spontaneous work behaviours and attitudes (Weiss & Cropanzano, 1996). Because workplace bullying is often considered an affective event (Jahanzeb et al., 2021), AET seems to be an especially relevant theoretical framework with which to study this phenomenon (Branch et al., 2021).

According to the tenets of AET, employees often react emotionally to negative activities. As a result of poor treatment, bullied employees tend to exhibit poor outcomes, such as negative job attitudes, diminished cognitive functioning (Hoel et al., 2011) and withdrawal (Zapf & Gross, 2001). Thus, we anticipate that negative work environment features and bullying events will generate a drop in self-perceived creativity. The present study is a reply to Nielsen and Einarsen's (2018) call for studies on the antecedents and consequences of workplace bullying within an integrated research framework using longitudinal study designs.

Work environment features as antecedents of workplace bullying

According to AET, work environment features cause particular work events to arise (Weiss & Cropanzano, 1996). In line with this notion, the workplace bullying literature has gathered support for the claim that work conditions, such as leadership type and social climate, explain the development of bullying at work (Salin & Hoel, 2020; Balducci et al., 2021). Termed "the work environment hypothesis" (Leymann, 1996), this perspective explains how the work environment influences the emergence and evolution of workplace bullying. This view stresses the function of the following factors in predicting workplace bullying: a negative psychosocial climate and culture (i.e. sanctions or reinforcements), interpersonal conflicts, role ambiguity (i.e. being provided with deficient and uncertain information), role conflict (i.e. obtaining discrepant expectations), negative leadership practices (especially unfair and unsupportive supervision), job demands (e.g. task overload and time pressure) and job resources (e.g. autonomy, rewards and support) and organisational change (e.g. downsizing and re-engineering, which are often accompanied by job insecurity) (Rodríguez-Muñoz et al., 2009; Hauge et al., 2011; Skogstad et al., 2011; Tagoe & Amponsah-Tawiah, 2019; Salin & Hoel, 2020; Balducci et al., 2021; Sischka et al., 2021). Findings from the longitudinal study results suggest that role ambiguity and role conflict independently predict subsequent exposure to workplace bullying (Reknes et al., 2014). Moreover, negative activities have been shown to be more likely when organisational chaos – that is, ambiguity, confusion, chronic problems and disruption – prevails (Hodson et al., 2006; Roscigno et al., 2009a; 2009b).

In summary, robust research findings using various designs (e.g. longitudinal studies and multilevel inquiries) have confirmed the relationship between work environment and workplace bullying (Salin & Hoel, 2020; Balducci et al., 2021). Therefore, we predict that, in line with AET, the work environment is related to the affective events of exposure to workplace bullying.

H1: Organisational bullying risk factors in T1 will be related to exposure to workplace bullying in T1.

Work environment features as antecedents of decreased creativity

Drawing on AET, work environments also influence the consequences of affective events (Weiss & Cropanzano, 1996). Therefore, we can infer that work environments can also impact employees' creativity. Although creativity can be conceptualised differently, we focused on bullied workers' beliefs about their creativity using the "style of creative behaviour model" (Strzalecki, 2000; 2012) to study self-reported creativity. Strzalecki (2000) aimed to create a holistic concept of creativity. He saw the essence of creativity as the cooperation of three spheres of human functioning: cognitive, personality and axiological. The theoretical background of the model is based on meta-theories such as general intelligence structure (Spearman, 1904; Strzalecki, 2012); a single higher-order general factor of personality (Musek, 2007); and cognitive meta-components such as thinking styles (Sternberg, 1997; Strzalecki, 2012), field-independence cognitive style (Witkin, 1964; Royce, 1973; Strzalecki, 2012) and the traditional creativity approach (Guilford, 1978). Like other researchers (Hofstee, 2001; Batey & Furnham, 2006; Musek, 2007), Strzalecki examined the relationships between areas of human functioning such as personality, intelligence and creativity. Based on this theoretical framework, he identified various aspects of creativity – from cognitive functioning and features associated with being a creative person, such as noncompliance, to motivation and personality traits that enable the development of creativity (Nęcki, 2012). The final model contains four factors of creativity: internal locus of evaluation, flexibility of cognitive structure, self-realisation and ego strength (Strzalecki, 2012). Internal locus of evaluation is the ability to oppose group pressure, present one's own ideas even if they are unpopular and realise one's goals even after experiencing difficulties and failures. Flexibility of cognitive structure is connected to solving tasks. Highly flexible individuals are innovative, can combine ideas from different areas and tend to find many solutions. Self-realisation means experiencing satisfaction from undertaking and completing long-term and challenging tasks. Finally, individuals characterised by high ego strength can clearly identify and accept themselves and have strong value systems.

On the one hand, research on creativity at work indicates that some social-environmental features may facilitate employees' creativity and trigger

intrinsic motivation, such as an organisation's basic orientation towards innovation; resources (e.g. sufficient time to support or produce novel work); management practices (especially reduced control over employees); greater autonomy; the provision of interesting and challenging tasks; support from the organisation, supervisors and colleagues; and the absence of external time pressure (Amabile, 1988; Amabile et al., 1996; Amabile et al., 2002; Hirst et al., 2011; Gong et al., 2013; Grant, 2016; Kim & Choi, 2017).

On the other hand, abusive supervision has a detrimental effect on creativity, leading to an unwillingness to contribute to an organisation (Lui et al., 2012; Zhang et al., 2014). Some workplace bullying predictors are consistent with creativity inhibitors. Specifically, aversive leadership, unsupportive supervisors and unsupportive organisational climates all hinder creativity (Tierney & Farmer, 2002; 2004; Zhou, 2003; Choi et al., 2009; Rego et al., 2012; Yoshida et al., 2014; Kim & Choi, 2017) and predict workplace bullying (Hauge, 2007; 2011). We therefore find it reasonable to anticipate that organisational bullying risk factors will predict a drop in creativity, especially in its motivational aspects (leading to unwillingness to contribute to the organisation; Lui et al., 2012; Zhang et al., 2014). Taking the style of creative behaviour model into consideration, we expect that bad working conditions – here termed *organisational bullying risk factors* – deteriorate all aspects of creativity, but especially self-realisation. Thus, we hypothesize the following:

H2: Organisational bullying risk factors in T1 will predict low individual levels of self-perceived creativity (and its aspects, but especially self-realisation) in T2.

Workplace bullying as an inhibitor of creativity

Moreover, in line with the core assumptions of AET, affective events trigger affective reactions, work attitudes, affect and judgement-driven behaviours. According to this notion, studies that have empirically tested the expectations of AET using workplace bullying as an affective event have indicated, for example, that maladaptive coping strategies (Glasø et al., 2011) or an increase in anger lead to workplace deviance after exposure to bullying (Jahanzeb et al., 2021). Bullying is a traumatic event connected with prolonged stress, a drop in perceived job satisfaction and decreased work engagement (Bowling & Beehr, 2006; Hoel et al., 2011). Taking creativity into account, researchers have also shown that bullying has a negative impact on employees' creative self-efficacy – that is, the belief that they possess good and creative ideas (Jiang et al., 2016). Moreover, exposure to bullying has been shown to predict a decrease in openness to experience (Nielsen & Knardahl, 2015), which is related to creativity. A high degree of openness demonstrates that a person is flexible, intellectually curious, imaginative and independent and that they proactively seek and appreciate experiences for their own sake, explore the unfamiliar and prefer a variety of activities over a standardised routine (Pervin, 1993). It is therefore possible that exposure to bullying influences not only creative self-efficacy and openness to new experiences but also the perception of one's own creativity. Taking the styles of the creative behaviour model into consideration, we predict that exposure to bullying will deteriorate self-realisation and flexibility of cognitive structure. Thus, we propose the following:

H3: Exposure to workplace bullying in T1 will predict lower self-perceived creativity (and its aspects, but especially flexibility of cognitive structure and self-realisation) in T2.
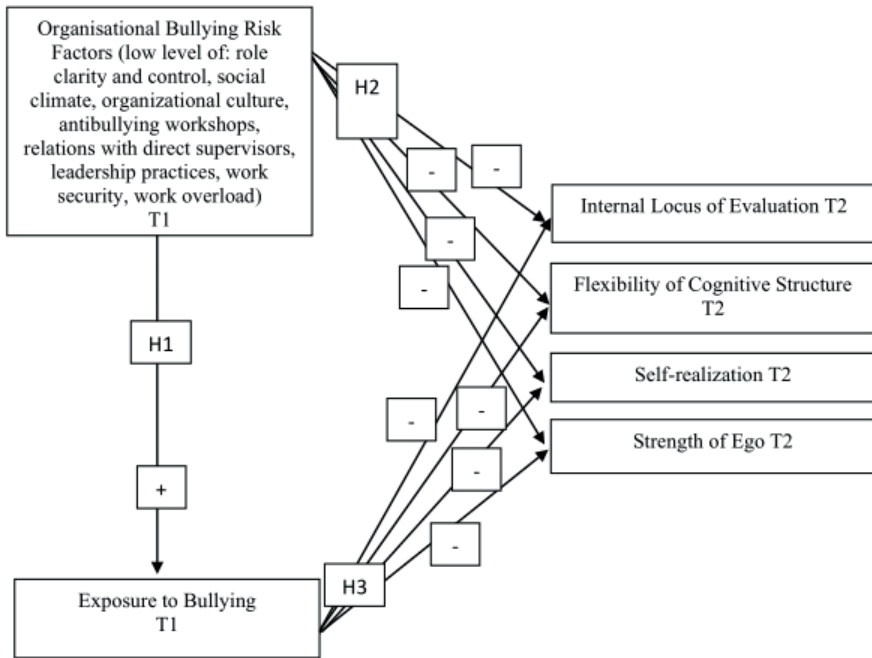
Figure 1 summarises our hypotheses.

Figure 1. Conceptual model summarizeing the hypotheses

Source: Authors' research.

Methods

To test the hypotheses, a complete two-wave panel study was conducted with a time lag of approximately six months between each wave. This interval was deemed adequate as the minimum period for observing long-term stress-or – strain relationships in the case of workplace bullying (Rodríguez-Muñoz et al., 2009). The study was approved by the Ethical Committee of the SWPS University of Social Sciences and Humanities.

Procedure and participants

Data were collected from 549 employed students (aged 19–55, M = 25.95, SD = 5.44, 94% women). The fact that the sample was almost entirely female was linked to the specificity of the university profile (pedagogy students are most often female). The majority of the participants were teachers or other education sector officers working mainly in full-time positions and completing additional education in pedagogy and special pedagogy from Poland. Questionnaires were distributed during lectures. The selection criteria required participants to be employed in full-time positions and to be in contact with their superiors or subordinates at least three times per week (Glasø & Einarsen, 2008). Prior to data collection, all participants signed an informed consent form through which they agreed to participate in both waves of the study. All respondents were invited to participate in the second wave of the study. In total, 261 participants (aged 19–53, M = 25.05, SD = 5.44, 95.8% women) were included in the second wave. The response rate (the percentage of respondents who took part in the second wave compared to those who took part in the first wave) was 47.54%, which is comparable to other longitudinal studies (Lange et al., 2008). Respondents were not rewarded for their participation, and their participation was anonymous. Participants were asked to sign the questionnaires with the same identifiers during the first and second waves.

Instruments

Bullying. Workplace bullying was measured by a Polish version of the Negative Acts Questionnaire – Revised (NAQ-R; Warszewska-Makuch, 2007) developed by Einarsen et al. (Einarsen et al., 2009; Notelaers & van der Heijden, 2021). The NAQ-R consists of 22 items and describes different behaviours that may be perceived as bullying if they occur regularly. All items were formulated in behavioural terms, with no reference to the phrase "bullying and harassment." The NAQ-R contains items referring to both direct (e.g. open attack) and indirect (e.g. social isolation and slandering) behaviours. It also contains items referring to personal and work-related forms of bullying. For each item, the participants were asked how often they had been exposed to the behav-

iour at their present workplace during the last six months on a 5-point scale (1 = 'never,' 2 = 'now and then,' 3 = 'monthly,' 4 = 'weekly' and 5 = 'daily'). The 22 NAQ-R items were summarised according to Nielsen et al. (2011).

Creativity. Creativity was measured using the Creative Behavior Questionnaire (CBQ; Strzalecki, 2012). The CBQ yields information about four domains of creativity and consists of 60 items, with respondents indicating whether they agree with statements about The first CBQ subscale is internal locus of evaluation, (e.g. "I choose life goals that are consistent with my values"), the second is flexibility of cognitive structure (e.g. "I like to work on atypical and controversial problems"), the third is self-realisation (e.g. "I find new and difficult problems to be challenging"), and the fourth is ego strength (e.g. "I do not get discouraged after failures"). All four subscales contain 15 items. The four CBQ aspects of creativity are negatively correlated with neuroticism (specially strength of ego and internal locus of evaluation) and positively correlated with extraversion, Herman's motivation to achieve, Guilford's creativity measure, flexibility (originality), and Raven's IQ measure (Nęcka, 2012; Strzalecki, 2000; 2012). Moreover, significant differences have been found between unemployed individuals and employees in creative professions (mainly entrepreneurs) for all four factors (Strzelecki, 2000; 2012). The higher the participants' scores on particular subscales, the higher the creativity they displayed. As Strzalecki (2012) stressed, there is no one general creativity trait, which is why we conducted analyses on the four creativity factors separately.

Bullying risk factors. The risk of workplace bullying was measured using the Polish Bullying Risk Assessment Questionnaire (ORM; Warszewska--Makuch, 2012). The ORM was based on Hoel and Giga's (2006) Bullying Risk Assessment Tool. The ORM includes 41 items describing the organisational antecedents of workplace bullying. It consists of eight subscales: role clarity and control (e.g. "I know exactly what is expected from my work"), social climate (e.g. "Interpersonal conflicts occur frequently at my work"), organisational culture (e.g. "The system of awards is clearly stated at my work"), anti-bullying workshops (e.g. "I was informed about bullying risk factors, sexual harassment, discrimination and strategies aimed at coping with these problems"), relations with direct supervisors (e.g. "My supervisor cares about my wellbeing"), leadership practices (e.g. "Negative activities such as harassing

others are not noticed or punished at my work"), work security (e.g. "I could easily lose my job") and work overload (e.g. "I do not have enough time to do my duties"). Respondents were asked to indicate whether they agreed with a range of statements with response categories from 1 ("definitely yes") to 6 ("definitely no"). We have summarised all the ORM items according to the author's suggestion (Warszewska-Makuch, 2012). The higher the score on the ORM, the worse the working conditions and the higher the risk of bullying (Warszewska-Makuch, 2012).

Control variables. The analyses included two control variables: age (in years) and gender (1 = women, 2 = men).

Results

First, the means, standard deviations, and correlation analyses (Table 1) were calculated. The correlation analysis revealed that exposure to workplace bullying and organisational bullying risk factors had high stability at T1 and T2. Creativity aspects were also relatively stable over time.

In line with our hypotheses, we found that the more negative organisational features were, the more participants were exposed to workplace bullying at both T1 and T2. Thus, H1 was confirmed. Worse working conditions at both T1 and T2 were also associated with a correspondingly lower level of internal locus of evaluation, self-realisation and ego strength at T2. Moreover, employees who were more exposed to bullying at T1 experienced lower self-realisation at T1. Finally, a low locus of evaluation, self-realisation and ego strength at T2 was associated with increased exposure to bullying at T2.

Table 1. Descriptive Statistics and Correlations Between Particular Variables (n = 261)

Measure	1	2	3	4	5	6	7	8	9	10	11	12
1. ILE T1	(.93)											
2. FCS T1	0.72**	(.75)										
3. SR T1	0.71**	0.78**	(.76)									
4. SE T1	0.11	0.01	0.24*	(.89)								

Table 1. (continued)

Measure	1	2	3	4	5	6	7	8	9	10	11	12
5. EB T1	0.01	0.11	0.06	-0.17*	(.93)							
6. OF T1	-0.10	-0.04	-0.13	-0.14	0.39*	(.93)						
7. ILE T2	**0.34***	0.14*	0.16	−0.03	−0.08	0.18*	(.94)					
8. FCS T2	0.23*	**0.24****	0.18	-0.09	-0.01	0.16	0.65**	(.77)				
9. SR T2	0.20*	0.16**	**0.24****	0.11	−0.19*	0.29*	0.64**	0.70**	(.77)			
10. SE T2	0.12	0.08	0.23*	**0.46****	-0.11	0.19*	0.12	-0.05	0.25*	(.89)		
11. EB T2	−0.10	0.01	-0.02	-0.10	**0.55****	−0.50*	-0.21*	-0.10	-0.20*	-.023*	(.95)	
12. OF T2	-0.14	-0.01	-0.05	-0.10	0.30*	**0.55****	-0.29**	-0.18*	-0.25**	-0.27*	0.60**	(.94)
Min	1.73	1.53	1.27	1.00	1.00	2.07	1.00	1.47	1.33	1.27	1.00	2.00
Max	5.00	5.00	5.00	4.87	4.59	5.85	4.87	4.73	5.27	4.93	4.32	5.80
M	3.82	3.34	3.25	3.08	1.57	4.00	3.78	3.34	3.24	3.08	1.51	4.02
SD	0.63	0.56	0.65	0.71	0.61	0.78	0.58	0.53	0.63	0.66	0.58	0.70

$*p < 0.01$, $*p < 0.001$

Note: ILE = Internal Locus of Evaluation, FCS = Flexibility of Cognitive Structures, SR = Self-realization, SE = Strength of Ego, EB = Exposure to Bullying, OF = Organisational factors; stability of particular variables in time bolded; reliabilities diagonally in parentheses.

Source: Authors' research.

The regression results are presented in Table 2. In support of H3, when including only the exposure to bullying measured in wave 1 as a predictor for each creativity aspect measured in wave 2, controlling for age and gender (Model 1), exposure to bullying decreased two of the creativity aspects: self-realisation and strength of ego. However, after including the organisational bullying risk factors measured in wave 1 (Model 2), exposure to bullying no longer predicted creativity. Bad working conditions at T1 were a stronger predictor of the decrease in particular creativity aspects at T2, thus supporting H2.

Moreover, we conducted structural equation modelling to test the conceptual model. The final model (Figure 2) revealed that organisational bullying risk factors were the only predictor of a drop in particular creativity aspects (χ^2 = 9.67, df = 4, p = 0.046, $CMIN/DF$ = 2.42, GFI = 0.99, $AGFI$ = 0.94, $RMSEA$ = 0.07).

Table 2. Regression Results. Standardised Regression Coefficients (N = 261)

	Internal Locus of Evaluation T2		Flexibility of Cognitive Structures T2		Self-realization T2		Strength of Ego T2	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Age	-0.06	-0.06	-0.04	-0.05	0.02	0.02	0.21**	0.21**
Gender	-0.01	-0.01	-0.01	-0.01	0.07	0.07	0.01	0.01
Exposure to bullying T1	-0.07	-0.01	-0.01	0.07	-0.20*	-0.09	-0.13*	-0.06
Organisational factors T1		-0.18*		-0.19*		-0.25**		-0.17*
R2	0.01	0.02	0.01	0.03	0.03	0.08	0.05	0.07
ΔR2		0.03*		0.03*		0.05**		0.02*

*p < 0.01, *p < 0.001
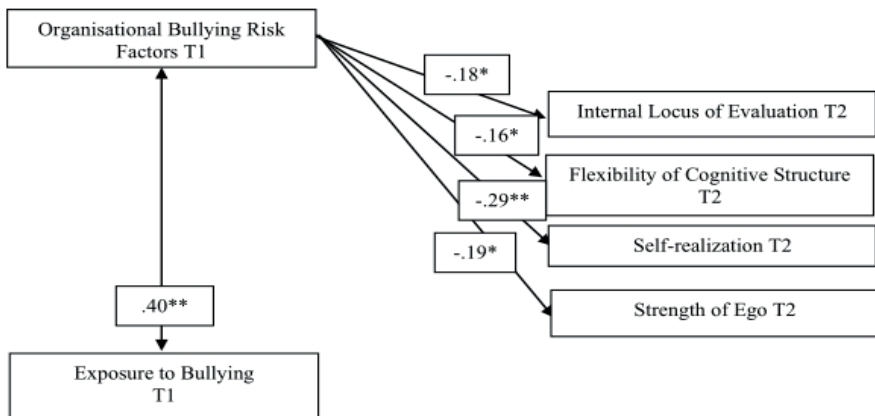
Note: T1 means wave 1, T2 means wave 2.

Figure 2. Results from structural equation analysis. Standardised Regression Estimates

Source: Authors' research.

Discussion

The study was derived from AET (Weiss & Cropanzano, 1996) to propose that (1) work environment features are related to experiencing affective events (i.e. workplace bullying); (2) work environment features impact affective, motivational and behavioural responses, here impairments in self-perceived creativity; and (3) exposure to bullying generates a drop in employee creativity. The obtained findings largely validate these theoretical predictions.

This research helps extend the knowledge on workplace bullying as an affective event generated by work environment features that influence employees' performance. Despite numerous studies on the work environment hypothesis (Salin & Hoel, 2020; Balducci et al., 2021), relatively few investigations have focused on antecedents and/or consequences of exposure to bullying as an affective event. The originality of the present study is associated with the indication that a drop in individual creativity is a result of exposure to bullying and organisational bullying risk factors. Previous studies have focused on the consequences of exposure to bullying for individual health and well-being (Mikkelsen et al., 2020; Conway et al., 2021; Hansen et al., 2021; van Heugten et al., 2021) and the effects of bullying on organisational productivity and efficiency (Salin & Hoel, 2020). However, to the best of our knowledge, this is one of the first studies to indicate the negative effects of organisational bullying risk factors and exposure to bullying on employees' creativity.

As predicted, exposure to bullying leads to lowered self-realisation and ego strength, which means that employees who are treated negatively at work may become reluctant to undertake and realise long-term and challenging tasks, experience less satisfaction from solving tasks and be less able to complete important tasks. Bullied employees may also have a weakened system of values and lowered self-esteem. The results we obtained suggest that exposure to bullying results in victims' inability to introduce order into their lives and tasks (Strzałecki, 2012). This result is consistent with findings indicating that bullying has negative effects on employees' creative self-efficacy (Jiang et al., 2017), causing them to lose faith in their capacity to implement new ideas. Our findings suggest that employees exposed to bullying may perceive themselves as less competent and less motivated, and negative self-perception may

make them unable to plan or undertake challenging tasks (Strzałecki, 2012). The obtained results are also in line with findings showing that experiencing negative treatment at work decreases openness (i.e. seeking new experiences, exploring the unfamiliar and being flexible, imaginative and curious) (Nielsen & Knardahl, 2015). The present study's findings suggest that workplace bullying has detrimental consequences for individuals, decreasing their self-perceived creativity and, specifically, their self-realisation and ego strength.

Finally, the aim of the present study was to determine whether workplace bullying and its organisational antecedents function as inhibitors of creativity. In line with previous findings on inhibitors of organisational creativity (Tierney & Farmer, 2002; 2004; Zhou, 2003; Choi et al., 2009; Rego et al., 2012; Yoshida et al., 2014; Kim & Choi, 2017), we found that working in an organisation suffering from bullying risk factors generates a drop in self-perceived creativity. Our results indicate that organisational factors such as low role clarity, negative social climate, unhealthy organisational culture, lack of anti-bullying workshops, negative relations with direct supervisors, bad leadership practices, low work security and work overload predict a decrease in one's perception of oneself as a creative individual. Importantly, our results indicate that the mere appearance of workplace bullying risk factors may trigger a drop in individual creativity.

Finally, the present study serves as an additional verification of the work environment hypothesis using a longitudinal design. The results confirm Leymann's (1996) predictions. Hauge et al. (2007; 2011) found that a negative social climate, ambiguous roles and unfair and unsupportive leadership are related to workplace bullying. Here, it has been shown that these organisational factors cause exposure to workplace bullying. Bad working conditions, unclear rules, role conflicts and maladaptive leadership practices generate stress and interpersonal conflicts and elicit negative behaviours.

Limitations and future research

Some limitations of the present study should be mentioned. The sample was composed almost entirely of women working in the education sector, which limits the generalisability of the obtained results. These sample features may uncover the vulnerability effects surrounding gender status and occupational

positioning. Some findings suggest that women are more prone to being exposed to workplace bullying (Cortina et al., 2001; Salin, 2015); however, other data do not confirm this pattern (Einarsen & Skogstad, 1996; Leymann, 1996; Hoel & Cooper, 2000; Vartia & Hyyti, 2002), with some findings even indicating that men are more vulnerable (Wimmer, 2009).

Another limitation of our study is the six-month period between each wave. Such short time lags have been used in other longitudinal studies on workplace bullying (Podsiadly & Gamian-Wilk, 2017), but longer time lags have been more frequently employed in other studies (e.g. two years in Nielsen & Knardahl, 2015). It is possible that we could not observe significant creativity changes during this shorter period. If we implemented longer time periods, changes in self-rated creativity could be noticed. Additionally, future research should utilise more than two waves. Such a strategy may enable the observation of causal relationships indicating that negative workplace conditions generate exposure to workplace bullying, which in turn triggers a drop in individual creativity.

Moreover, in future replications of this study, other measures could be used to diagnose organisational bullying risk factors and creativity. The tools introduced in the present study have some shortcomings. For example, both measures are long and treat the diagnosed features holistically. The ORM considers many organisational aspects that, in light of the literature (Hauge et al., 2007), do not necessarily strongly predict workplace bullying (e.g. work overload). Future studies should consider the specific – not summarised – aspects of workplace conditions to identify which factors hinder bullied workers' perceived creativity. The measure of creativity used in the present study was based on a very broad theoretical model that treated creativity holistically. In future studies, it might be interesting to include a narrower measure to diagnose more specific spheres of creativity in organisations. Therefore, the conclusion of the present study should be narrowed to relationships between very broadly understood organisational features and creativity in the educational sector.

Using the same methodological approach as the present study, future research should focus on the causal relationship between bad working conditions, workplace bullying and workers' creativity among larger samples to generalise the results to non-educational sectors. Future research should also

investigate the causal relationships between these aspects, considering workers' overall stress and mental health as potential mediators. Moreover, the relationship between decreased creativity and the negative consequences for bystanders and other parties (e.g. students) involved in bullying should be investigated. Furthermore, previous studies have shown that targets' negative emotional reactions to bullying may bias their perceptions of being exposed to bullying and their evaluations of psychosocial environmental factors (Agervold & Mikkelsen, 2004). To rule out the impact of this kind of bias, future studies should include both the targets' and observers' perspectives on bullying and its relationship with creativity.

Practical implications

Successful organisations depend on individuals and teams to have good ideas; thus, creativity and the opportunity to implement creative ideas serve as a starting point for innovative companies. As creativity is of vital importance for organisations, the main aim of the present article was to identify the relationship between organisational bullying risk factors, exposure to workplace bullying and self-perceived creativity.

Importantly, the results should be used to conclude that bad working conditions predict workplace bullying and a drop in creativity in the educational sector. Under negative conditions, teachers display a lower internal locus of evaluation, less flexibility in their cognitive structure, decreased self-realisation and diminished ego strength. Thus, such education workers exhibit lower creativity on the cognitive and motivational levels. These findings can enhance the understanding of inadequate leadership practices and the effects of organisational bullying risk factors on employees' creativity. Therefore, we can expect that an inconvenient social climate, role ambiguity, poor relations with direct supervisors and work overload may diminish all aspects of teachers' self-rated creativity. Exposure to bullying generates a drop in self-realisation and ego strength, which means that bullied teachers experience lower satisfaction with the tasks that they undertake. Teachers' dissatisfaction and decreased internal locus of evaluation, cognitive structure flexibility and ego strength may influence not only their colleagues' motivation to work but also that of the students with whom they work. Therefore, it is essential to diag-

nose bullying risk factors in schools and to undertake anti-bullying policies. The findings of the present study suggest that to promote teachers' creativity, it is essential to build a constructive social climate and foster proper leadership practices (Hauge et al., 2007; 2011). To meet these goals and prevent bullying, well-defined operational procedures, roles, tasks and objectives should be implemented, workers' interests should be considered, employees should receive assistance with bureaucratic processes and work completion should be ensured (Hodson et al., 2006; Hauge et al., 2011).

Conclusion

This study endeavoured to further develop prior investigations into the antecedents and outcomes of workplace bullying. It was found that self-perceived creativity decreases as a result of working in a negative work environment characterised by bullying risk factors. Exposure to bullying generates a drop in self-realisation and ego strength. However, the mere appearance of bullying risk factors may lead to a decrease in employees' creativity. We hope that this investigation will pave the way for further research on preventing organisational bullying risk factors to help creativity among employees flourish.

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